



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,595	06/26/2000	Deuk-Sung Lim	P56132	3127

8439 7590 11/21/2003

ROBERT E. BUSHNELL  
1522 K STREET NW  
SUITE 300  
WASHINGTON, DC 200051202

EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT	PAPER NUMBER
----------	--------------

2852

DATE MAILED: 11/21/2003

26

Please find below and/or attached an Office communication concerning this application or proceeding.

GA

**Office Action Summary**

Application No.

09/603,595

Applicant(s)

LIM, DEUK-SUNG

Examiner

Susan S. Lee

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 20-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-31, 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 20, 23, 26 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 21, 22, 24, 25 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All   b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

Art Unit: 2852

**DETAILED ACTION*****Specification***

The disclosure is objected under 37 CFR 1.75(a) because on page 4, lines 8-10 (as amended in amendment filed 9/8/03), "the main body is formed with a first, a second, and a third paper transport paths for discharging the recording paper and paper fed **from** ... and **the optional device, respectively**" is not supported in any of the figures nor in the later parts of the specification on page 13, lines 14-16, stating "a first paper transport path 93 guides a paper sheet fed **from** multipurpose feeding unit assembly 20" not optional device 12 or 12' as stated on page 4, lines 4-6; and on page 13, lines 16-17, stating "a second paper transport path 94 guides a paper sheet fed from feeding cassette 15" not optional device 12 or 12' as stated on page 4, lines 4-6. What is the optional device in this sentence? The third paper transport path discharges recording paper and paper fed from what optional device?

Appropriate correction is required.

The abstract of the disclosure is objected to because on lines 7-8, "main body is formed with a first, second, and a third paper transport paths for discharging the recording paper fed **from** the optional device" is incorrect for the same reasons given above in the objection to the specification. The optional device could be a sorter, power stacker and a large scale paper feeding unit. The only time the paper is fed **from** the optional device be if the optional device is the large scale paper feeding unit. The abstract would be incorrect when the optional device is either the sorter or a power stacker. Correction is required. See MPEP § 608.01(b).

Art Unit: 2852

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23, 26, and 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 23, line 3, "said ... second cover plates" lacks antecedent basis.

As to claim 23, line 5, "said openings" lack antecedent basis.

As to claim 26, line 4, "said base plate" lacks antecedent basis.

As to claim 32, line 2, "said optional auxiliary device" lacks antecedent basis.

As to claim 34, line 2, "said base plate" lacks antecedent basis.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2852

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (828) in view of Muto (6,510,290) and Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418).

Arai also discloses a sheet jam removal device in a feeding unit assembly; and a sheet feeding unit 4 located on one side of the copying machine main body 1. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that reads on the instant invention's base unit, upper conveyor 33 or upper conveying guide 50 that reads on the instant invention's first cover plate, feed rollers 51 on first cover plate 33 and feed rollers 46 on the base unit 32, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the first cover plate 33 for pivoting the cover plate 33 when it is separated from the base unit 32. The linkage 34 links the first cover plate 33 and the base unit 32. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 1 - column 8, line 65, and column 9, lines 19-45. The first cover plate 33 comprises an upper conveying guide 50. Sheets are guided in the space

between the upper conveying guide 50 and the lower conveying guide 45 which is part of the base unit 32. Note column 8, lines 27-29. A grip 58 which reads on the instant invention's grasping portion enables the first cover plate 33 to be raised and opened to enable jammed sheets to be removed. Note column 8, lines 43-65.

Arai differs from the instant invention by not disclosing an optional auxiliary device and a spring.

Muto discloses a printing apparatus with an optional addable sorter 205 located on a side of the main body 201 (see Fig. 1). Note column 7, lines 9-22.

Tominaga (Japan, 10-324435) discloses a medium processing device that eliminates jammed documents, replacing parts, checking and cleaning the inside of a device with an upper guide plate 5 and a lower guide plate 6 held together by a tension spring 18. An operator lifts up the upper guide plate 5 so that it pivots on shaft 11 and separates from lower guide plate 6 at an angle so that a jammed document can be removed. Note abstract and Figs. 1-6. The benefits of using this arrangement with the tension spring 18 is that the guide plates do not fall in and catch the operator's hands when the operator is reaching in to gain access between the guide plates. Note translation done by Schreiber Translations, Inc, page 9, [0011].

Gonidec et al. discloses a linkrod 26 that is a mechanical connection means between a front door 7 and a rear door 21 of a turbojet engine. This linkrod 26 may be replaced by a resilient element, such as a spiral spring. The resilient element preferably

imparts a pivoting force to the rear door 21 relative to the front door 7. Note column 4, lines 25-34 and column 6, lines 38-47.

Yokota et al. discloses a printing machine with a printing head 2 swingable around a pivot. A suppressing member link 11 holds the printing head 2 off a platen roller 1 and against the force of the set spring 5 when an actuating lever 10, also connected with the suppressing member link 11, is pivoted to move the suppressing member link 11 to raise the printing head 2. This suppressing member link 11 can be a link member or a tension spring 11b like the set spring 5 (Fig. 2). This spring 11b can absorb the tension or stop the tension of the set spring 5. This will prevent bumping of the printing head 2 and the platen roller 1 against each other. Note column 2, lines 49-57, column 4, lines 9-36.

Nagasawa et al. discloses that it is well known in the art to use fewer parts to reduce cost of manufacturing such as links 88 and 89 that comprises a link mechanism used in a sheet feeder. The number of component parts is increased by a complicated link mechanism resulting in a high cost. Note column 3, line 67 – column 4, line 4.

Jones et al. discloses using a paper input tray 10' used in a printer having fewer parts than another paper input tray 10, thus the manufacturing cost and physical wear is less. Note column 4, lines 6-12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Arai with the optional addable sorter of Muto because it is known in the art that large print jobs are desired and using an

optional addable sorter of Muto would sort the print jobs according to an operator's request thus saving time compared to sorting the print jobs manually by the operator.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Arai by replacing the linkage with that of the spring of Tominaga because there is a problem with manufacturing the linkage of Arai due to the fact it requires many components or features such as an engage pin 70, a first slot 71, a second slot 72, a turning pin 65, and a grip portion 63 (note Arai; column 8, line 66 – column 9, line 18). The manufacturing of this linkage can be costly. Thus, using a tension spring 18 of Tominaga would be simple and cost effective since it reduces the number of components and features needed to allow two plates to separate and permit removal of jammed sheets or documents along a paper transport path. The evidence to support such a motivation where a complicated assembly is less desirable over a more simple one is well known in the art. Such evidence is shown by Nagasawa et al. (column 3, line 67 – column 4, line 4) and Jones et al. (column 4, lines 6-12); and such motivation from a third reference can be shown to combine two references. *In re Sastry*, 62 USPQ2d 1436.

In addition, a linkage and a resilient member such as a spring are equivalent because Gonidec et al. and Yokota et al. shows they are equivalent structures known in the art. Therefore, because these two connecting members were art-recognized equivalents as shown in Gonidec et al. and Yokota et al. at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a linkage for a coil spring member.



Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (828) in view of Muto (6,510,290) and Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418), as applied to claim 20 above, and further in view of Ogata (567).

Arai (828) in view of Muto (6,510,290) and Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418) as discussed above differ from the instant invention by not showing guide rollers.

Ogata discloses a copying apparatus with feeding units 16, 18 for feeding sheets of recording paper on one side of the main body, and a paper guide unit 102 that pulls out when an operator pulls on handle 178 of the front cover 184 of subframe 158 for paper jam removal. This paper guide unit 102 reads on the instant invention's feeding unit assembly that is removably mounted. The feeding unit assembly 102 comprises an upper and lower stack guides 104 and 106 that read on the instant invention's cover plate and base unit respectively. The subframe 158 reads on the instant invention's receiving unit. At the time when the receiving unit 158 is pulled toward the user to remove jam paper, a roller 200 is guided by curved portion 210 of guide groove 202, and at the same time roller 206 is guided by curved surface 214 of guide surface 208. Then, roller 200 is guided by flat portion 212 of guide groove 202, and roller 206 is simultaneously guided by flat surface 216 of guide surface 208. Note column 4, lines 5-10 and lines 35-50; and column 7, line 47- 62. The roller 200 reads on the instant

invention's guide rollers. It would be inherent that another roller 200 would be on the other side of the receiving unit 158.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Arai (828) in view of Muto (6,510,290) and Tominaga (Japan, 10-324435) as shown by Gonidec et al. (476), Yokota et al. (896), Nagasawa et al. (714), and Jones et al. (418) with that of Ogata by using the guide rollers of Ogata so that the feeding unit assembly can easily be guided out of the image forming apparatus while the operator pull the assembly out.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 20 and 26 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Allowable Subject Matter***

Claim 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 32-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 21, 22, 24, 25, 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 28-31,35, and 36 are allowed over the prior art of record.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


***Remarks***

It is noted that the translation to Japan document No. 10-324435 done for the US Patent and Trademark Office by Schreiber Translations, Inc has the inventor name spelled as "Tominaka". The inventor's name as appears on the English Abstract, copyright, 1998, JPO is "Tominaga". This is the same inventor, only the spelling of the last name is different. To be consistent, the Examiner has used "Tominaga" throughout the office action as the reference to Japan, document No. 10-324435 including the translation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
Susan S. Lee  
Primary Examiner  
Art Unit 2852

sl